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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

September 30, 2008

CERTIFIED RETURN RECEIPT  
7005 2570 0000 4801 7192

Kevin Butters  
Towers Sand and Gravel  
760 North Harrisville Road  
Harrisville, Utah 84404

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, Towers Sand and Gravel LLC and C. E. Butters Realty and Construction Inc., Towers Sand and Gravel Quarry, M0570006, Task 2506, Weber County, Utah

Dear Mr. Butters:

The Division has completed its review of your Notice of Intention to Commence Large Mining Operations (NOI) for the Towers Sand and Gravel Quarry, located in Weber County, Utah, which was received June 16, 2008. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the original mining notice using redline and strikeout text, so we can see what changes have been made. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, we will return one copy stamped "approved" for your records. Please provide a response to this review by December 1, 2008.

The complete NOI will include a reclamation surety calculation based on the mining and reclamation plans. Because of the incomplete nature of the mine plan, it is impossible at this time to make an accurate calculation of the surety that will be required. The Division currently holds a cash surety in the amount of \$18,600.00 for a five-acre small mine, but based on aerial photos, it appears the mine may be as large as 55 acres. Your NOI says mining will occur on 50-acre segments, and, until more accurate measurements are made and a more precise calculation can be done, the Division is willing to accept this 50 acre figure as the basis for an interim reclamation surety.

The interim surety required is \$197,400.00. This is based on average costs per acre for reclaiming "small" large mines, i.e. about 5-20 acres. The amount is \$6300.00 for the first acre of disturbance and \$3900.00 for subsequent acres. It is escalated to 2011 by which time the Division hopes the surety can be calculated based on the mine plan.



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Since you currently have a surety of \$18,600.00, the additional amount needed is \$178,800.00. **Please submit this additional surety by December 1, 2008.** It can be in the form of cash, a letter of credit, a certificate of deposit, or a corporate surety. For information about submitting the surety and associated reclamation contract, please contact Penny Berry at 801-538-5291 or by e mail at [bondcoordinator@utah.gov](mailto:bondcoordinator@utah.gov)

Questions about the review can be directed to the permit lead, Paul Baker at 801-538-5261, Tom Munson at 801-538-5321, or Leslie Heppler at 801-538-5257 (see the initials after each comment in the review). After you have had a chance to review the comments, it may be desirable to set up a meeting where we can discuss the review. The Division will suspend further review of the NOI until your response to this letter is received. Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. B. Baker', with a stylized flourish at the end.

Paul B. Baker  
Mineral Program Manager

## **REVIEW OF NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS**

**Towers Sand and Gravel and C. E. Butters Realty and Construction  
Towers Sand and Gravel Quarry  
M0570006  
September 24, 2008**

### **R647-4-104 – Operator's, Surface and Mineral Ownership**

Two operators are listed for this mining operation, Towers Sand and Gravel LLC and C. E. Butters Realty and Construction, Inc. "Towers Sand and Gravel LLC" is not registered with the Division of Corporations, but "Tower Sand and Gravel LLC" is. While this is probably a typographical error, it needs to be corrected, either with the Division of Corporations or on the application. (PBB)

Please include only one entity as the operator. Having two official operators greatly complicates several aspects of the regulatory program, including bonding and enforcement. Operator is defined in R647-1-106 as:

... any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary, agent, or other organization or representative of any kind, either public or private, owning, controlling, conducting, or managing a mining operation or proposed mining operation.

Note that all the entities listed in this definition are singular. (PBB)

### **R647-4-105 - Maps, Drawings & Photographs**

All maps submitted need scale, north arrow and Township, Range and Section lines. (LAH)

- 105.1 Topographic base map, boundaries, pre-act disturbance  
Submit a topographic map, which includes information required. (LAH)
- 105.2 Surface facilities map  
Please submit a facilities map which includes information required by this rule. Include a map that is tied to the surety bonding (LAH)
- 105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)  
Cross sections included are inadequate. The cross sections do not tie in to the existing topography on either end. The lines on the cross sections need to be defined, and more cross sections are needed. It is best to submit maps without vertical exaggeration. Map F1 is not realistic. (LAH)

The plan must include a map of the site that shows the pattern of storm water drainage within the site as well as coming from off site and entering and leaving the site. The watershed boundaries need to be identified on this map. All surface controls, ponds, culverts, springs etc. need to be shown as well. Please provide a copy of the Storm Water

Pollution Prevention Plan. The minimum plan requirements are listed on page J-2 of Appendix II.J of Permit No. UTR000000. (TM)

**R647-4-106 - Operation Plan**

106.3 Estimated acreages disturbed, reclaimed, annually.

The acreage figures shown on pages 8 through 12 do not match the figures shown in Section 106.3 on page 15. The difference is in the figures for parcels B and C. Please make the appropriate corrections. (PBB)

This section of the plan says no more than 50 acres will be disturbed at a time, so the plan, including all the maps of the existing disturbance and reclamation designs, needs to be for a 50-acre area that will be bonded and permitted. What is the actual area of the mine disturbances shown in the labeled aerial, B-2? Mine disturbances would include the clay pit, highwall, pit floor and stockpiles, topsoil stockpiles, and scale, and they may also include the contractor storage and alluvial sand and gravel areas. (PBB)

Other maps also need to be adjusted to show the operations and reclamation plans for the areas that will be permitted and bonded for reclamation. (PBB)

106.5 Existing soil types, location, amount

Please include information from the soil survey showing the physical and chemical nature of the soils and the aerial extent and depth of the soils. (PBB)

Please provide information about the physical (texture) and chemical nature of the material over which soil would be placed. The plan says about 25,000 cubic yards of soil has been stockpiled for use in reclaiming a 50-acre area which comes to an average of about 3.7 inches over the entire area. This is not enough depth for plants to establish root systems that will allow them to survive, so the material over which soil is placed needs to be suitable as a subsoil. The Division expects this material to be low in organic material and high in coarse fragments and sand, but there are limits to what is likely to be successful. Please provide information about the texture (including coarse fragments), sodium adsorption ratio, pH, electrical conductivity, and organic matter. (PBB)

Please clarify the comments about salvage of an additional 20,000 cubic yards of soil. The Division understands this material would be salvaged from areas to be permitted and disturbed at some point in the future but that this is not part of the current proposal. Is this correct? (PBB)

106.7 Existing vegetation - species and amount

Please provide adequate vegetation community and cover information for establishing a revegetation success standard. The plans says there are no areas of undisturbed premining use vegetation and that all existing vegetation is the result of agriculture/reclamation plantings.

The Division suggests that, within the area near the mine though not necessarily on Towers' property, there are probably undisturbed areas with soils and aspects similar to those found at the mine. (PBB)

If no such areas exist, please provide information about the vegetation that does exist in the area. What is the cover by species for areas that have been reclaimed? Alternatively, what crops are being grown, and what is the production? There needs to be baseline information upon which to base a revegetation success standard, and it needs to be for either an undisturbed vegetation community or a community similar to that which would be established in reclamation. (PBB)

106.8 Depth to groundwater, extent of overburden, geology

The depth to groundwater is quoted on page 16 of the permit as being several hundred feet deep. Where did this information come from? What is the source for onsite culinary and process water? Please identify the springs on your location map. (TM)

Submit a geologic map and geologic cross section; include the location of the spring. (LAH)

106.9 Location & size of ore, waste, tailings, ponds

Please provide a copy of the Storm Water Pollution Prevention Plan. The minimum plan requirements are listed on page J-2 of Appendix II.J of Permit No. UTR000000. (TM)

**R647-4-107- Operation Practices**

It is not clear if any blasting will be occurring on site. What will be done for public safety for blasting in the urban setting? What will be the seismic vibration limit? (LAH)

**R647-4-109 - Impact Assessment**

109.1 Impacts to surface & groundwater systems

The operator is required to include a general narrative description identifying potential surface and/or subsurface impacts. This description will include, at a minimum, projected impacts to surface and groundwater systems. (TM)

109.4 Slope stability, erosion control, air quality (fugitive dust control plan), safety

The operator is required a general narrative description identifying potential surface impacts. This description will include, at a minimum: projected impacts of the mining operations on erosion control. This should be included in the SWPPP Plan. (TM)

Please label the slope angles with the proper modifier, percent "grade" 1V: 100H and 50% grade and 1V: 1 H. Final slope angles can not exceed 1h:1v or 45 degrees. What slope stability factor of safety is being used to determine if the "1 to 1 slope is unsafe"? Will rockfall hazards be include in the slope study? (LAH)

**R647-4-110 - Reclamation Plan**

110.1 Current & post mining land use

Please include information about the uses of the land prior to any mining. (PBB)

The plan says the postmining land use is urban development with open space, and the Division considers this an alternative use compared to what likely existed prior to any mining. Does this meet local zoning requirements? What sort of urban development would occur? Please describe how the backfilling and grading plan will be compatible with this use. (PBB)

Have development plans been approved by Pleasant View? Until this happens, the Division will need to bond for returning the site to the pre-mining land use. (PBB)

Please note that it is difficult to build on or even to revegetated 1h:1v slopes. (LAH)

110.5 Revegetation planting program

The text of the plan refers to appendix F2 for a seed mix, but the Division is not able to find an appendix with this designation. It is assumed the plan is referring to the May 10, 1999, letter from John Swain. Please label the appendix. (PBB)

The map labeled F1 shows a revegetated area around part of the perimeter of the entire property with urban development in the rest of the area. As mentioned in the land use section above, until development plans—not just zoning ordinances—are actually approved, the Division requires that the reclamation plan show reclamation to the premining land use. Assuming this was wildlife habitat and grazing, the entire area needs to be revegetated. (PBB)

How does the map labeled F1 relate to the area that will be permitted for mining? This map appears to be for the entire property and not the 50-acre parcel discussed in other parts of the plan. (PBB)

Please show when the area will be seeded. It should be done in late fall, generally about October 1 through December 1. Spring seedings are rarely successful in Utah. (PBB)

**R647-4-112 – Variance**

Please note that a highwall steeper than 1h: 1v would require a variance. Justification required for the variance would include a geotechnical slope stability report stamped by the engineer of record. (LAH)

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**R647-4-113 – Surety**

More detail is needed. DOGM will help you get a better start on a spreadsheet. Most other large mines in the state with 50 acres of disturbance are bonding for between \$250,000 to \$500,000 dependent upon the final reclamation configuration and structures on the site. Note - Real Property used as collateral for bonding cannot be the same property that is being mined. (LAH)